

Math 220A - Complex Analysis

Instructor: Dragos Oprea, [doprea at you-know-where dot edu](mailto:doprea@you-know-where.edu), APM 6-101.

Webpage: <http://math.ucsd.edu/~doprea/220f23.html>.

Lectures: MW 11:00 – 12:20, APM B-412.

Office Hours: M 1- 2:30, APM 6-101 or by appointment.

Teaching Assistant: Robert Koirala, [rkoirala at you-know-where dot edu dot edu](mailto:rkoirala@you-know-where.edu)

Goals: This is the first in a three-sequence graduate course on complex analysis. Math 220AB and part of Math 220C cover material needed for the Qualifying Exam.

In Math 220A, we will discuss holomorphic and meromorphic functions, Taylor and Laurent expansions, Cauchy's theorem and its applications, calculus of residues, the argument principle, sequences of holomorphic and meromorphic functions, and others.

Textbook: Functions of One Complex Variable, by J. B. Conway. In Math 220A, we will cover material corresponding to parts of Conway III - V, with a short detour to a couple of sections in Conway VI, VII.

Additional Reading: Complex Analysis, by Lars Ahlfors.

Grade Breakdown: The final grade is based on homework (30%), midterm (30%) and final exam (40%).

Homework: The problem sets are mandatory and are a very important part of the course.

The problem sets are due on Tuesday at 5pm. There will be a 24 hr grace period, but no other extensions can be given. The solutions are to be uploaded on **Gradescope**.

Working with your peers is acceptable, but solutions must be written independently.

Exams: There will be a Midterm on Monday, November 6 (in class), as well as a Final Exam on Tuesday, December 12, 11:30 – 2:30PM (in class). The exams are closed-book.

Prerequisites: Math 140AB. However, this is a graduate level course, so at times, we may use notions from related fields, including topology and real analysis. I am happy to discuss prerequisites on an individual basis. If you are unsure, please don't hesitate to contact me.

Academic Integrity: All students are expected to conduct themselves with academic integrity. Violations of academic integrity will be treated seriously.